

Figure 1

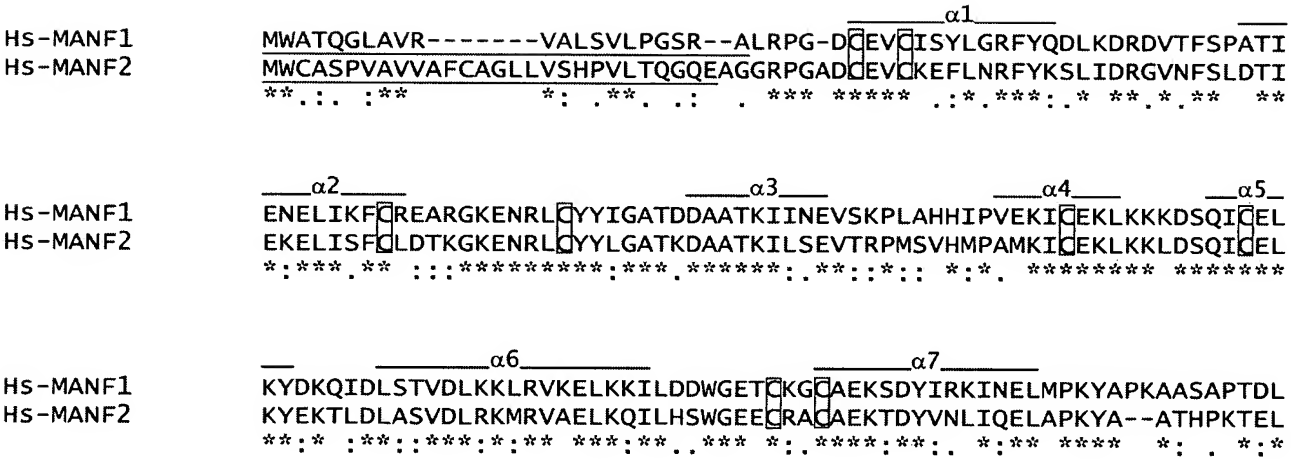


Figure 2

Homo_sapiens-MANF2_Protein
Mus_musculus-MANF2_Protein

MWCASPVAVVAFcAGLLVSHPLVTQGGEAGGRPGADCEVCKEFLNRFYKS
MRCISPTALVTFcAGFCISNPVLAQGLeAGVGPRADCEVCKEFLDRFYNS
* * ** .:-.:*****: .:.****:.** *** * *****:.....*

Homo_sapiens-MANF2_Protein
Mus_musculus-MANF2_Protein

LIDRGVNSLDTIEKELISFLDITKGKENRLCYYLGATKDAATKILSEVT
LLSRGIDFSADTIEKELLNFCSDAKGKENRLCYYLGATTDAATKILGEVT
*: *: *: * ***** : * *: ***** ***** *

Homo_sapiens-MANF2_Protein
Mus_musculus-MANF2_Protein

RPM SVHMPAMKI CEKLKKLDSQICE LKYEKTLDLASVDLRKMRVAELKQI
RPM SVHIPAVKI CEKLKKMDSQICE LKYGKKLDLASVDLWKM RVAELKQI
***** : * : ***** * ***** * ***** *****

Homo_sapiens-MANF2_Protein
Mus_musculus-MANF2_Protein

LHSWGEE[CR]CAEKTDYVNLIQELAPKYAATHPKTEL
LQRWGEE[CR]CAEKSDYVNLIRELAPKYVEIYPQTEL
*: *****:*****:*****.:*:***

Figure 3

Mus_musculus-MANF1
Rattus_norvegicus-MANF1
Homo_sapiens-MANF1
Bos_Taurus-MANF
Gallus_gallus-MANF
Xenopus_laevis-MANF
Fugu_rubribes-MANF
Danio_rerio-MANF
Homo_sapiens-MANF2
Mus_musculus-MANF2
Drosophila_melanogaster-MANF
Canorhabditis_elegans-MANF

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CEVCI SYLGRFYQDLKDRDVTFS PATIEEELIKFCREARGKENRLCY YIG
CEVCI SYLGRFYQDLKDRDVTFS PATIEEELIKFCREARGKENRLCY YIG
CEVCI SYLGRFYQDLKDRDVTFS PATIENELIKFCREARGKENRLCY YIG
CEVCI SYLGRFYQDLKDRDVTFS PASIEKELIKFCREARGKENRLCY YIG
CEVCV TFLGRFYQSLKDNNEFTPASIEKELMKSCREAGKENRLCY YIG
CEVCV SFLSRFYQSLKERQVEFKPDAVEKELLKTCNDARGKENRLCY YIG
CPVCIA FLGRFYDSLKDNEVAFNNVDIEKALT KSCNDAKGKENRLCY YIG
CEVCV GFLQRLYQTIQENNVKFDSDSIEKALLKSCDAKGKENRLCY YIG
CEVCKE FLNRFYKSLIDRGVNFSLDTIEKELISFCLDTKGKENRLCY YLG
CEVCKE FLDRFYNSLLSRGIDFSADTIEKELLNFCSDAKGKENRLCY YLG
CEVCVK TVRRFADSLDDS-TKKDYKQIETAFKKFCQAQKNKEHRFCY YLG
CEVCCK VLDVMAKVPAGDKSKP-DAIGKVIREHCETTRNKENKFCY YIG
* ** : . : : : . * :.***: *.*:
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Mus_musculus-MANF1
Rattus_norvegicus-MANF1
Homo_sapiens-MANF1
Bos_Taurus-MANF
Gallus_gallus-MANF
Xenopus_laevis-MANF
Fugu_rubribes-MANF
Danio_rerio-MANF
Homo_sapiens-MANF2
Mus_musculus-MANF2
Drosophila_melanogaster-MANF
Canorhabditis_elegans-MANF

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ATDDAATKIINEVSKPLAHHIPVEKIC-EKLKKKDSQICELKYDKQIDLS
ATDDAATKIINEVSKPLAHHIPVEKIC-EKLKKKDSQICELKYDKQIDLS
ATDDAATKIINEVSKPLAHHIPVEKIC-EKLKKKDSQICELKYDKQIDLS
ATEDAATKIINEVSKPLSHHIPVEKIC-EKLKKKDSQICELKYDKQIDLS
ATSDAATKIINEVSKPMSHHIPVEKIC-EKLKKKDSQICELKYDKQIDLS
ATSDAATKITNEVSKPLSHHIPAEKIC-EKLKKKDGQICELKYDKQIDLS
ATSDAATKMINEVSKPMSHHVPVEKIC-EKLKKKDSQICELKYDKQIDLS
ATSDAATKITNEVSKPMSYHVPVEKIC-EKLKKKDSQICELKYDKQIDLS
ATKDAATKILSEVTRPMSVHPAMPKIC-EKLKKLDSQICELKYEKTDLA
ATDDAATKILGEVTRPMSVHIPAVKIC-EKLKKMDSQICELKYGKKDLA
GLEESATGILNELSKPLSWSMPAEKIC-EKLKKKDAQICDLRYEKQIDLN
ALPESATSIMNEVTKPLSWSMPTEKVCLEKLKGKDAQICELKYDKPLDWK
. :.***: *.*:***: :*. ** * * * * * .***:*** * *
```

Mus_musculus-MANF1
Rattus_norvegicus-MANF1
Homo_sapiens-MANF1
Bos_Taurus-MANF
Gallus_gallus-MANF
Xenopus_laevis-MANF
Fugu_rubribes-MANF
Danio_rerio-MANF
Homo_sapiens-MANF2
Mus_musculus-MANF2
Drosophila_melanogaster-MANF
Canorhabditis_elegans-MANF

```
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TVDLKKLRVKELKKILDDWGEMCKGCAEKSDYIRKINELMPKYAPKAASA
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TVDLKKLRVKELKKILDDWGESCCKGCAEKSDFIRKINELMPKYAPHAANA
TVDLKKLRVKELKKVLEDWGESCCKGCAEKSDFIRKITELMPKYAPAAARA
SVDLKKLRVKELKKILEEWGESCKGCVEKSDFIRKINELMPKYAPSAAKA
SVDLRKMRVAELKQILHSWGEECRACAETDYVNLIQELAPKYA--ATHP
SVDLRKMRVAELKQILQRWGEECRACAEKSDYVNLIRELAPKYV--EIYP
SVDLKKLRVKELKKILNDWDESCDGCLEKGDIFIKRIEELKPKYS-----
TIDLKMRVKELKNILGEWGEVCKGCJTEKAELIKRIEELKPKYV-----
: ** *.*:***: *.* * * * * :. * * * * *
```

Mus_musculus-MANF1
Rattus_norvegicus-MANF1
Homo_sapiens-MANF1
Bos_Taurus-MANF
Gallus_gallus-MANF
Xenopus_laevis-MANF
Fugu_rubribes-MANF
Danio_rerio-MANF
Homo_sapiens-MANF2
Mus_musculus-MANF2
Drosophila_melanogaster-MANF
Canorhabditis_elegans-MANF

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RTDL
RTDL
PTDL
RTDL
RADL
RTDL
RTEL
RTDL
KTEL
QTEL
RSEL
KEEL
:*
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Figure 4

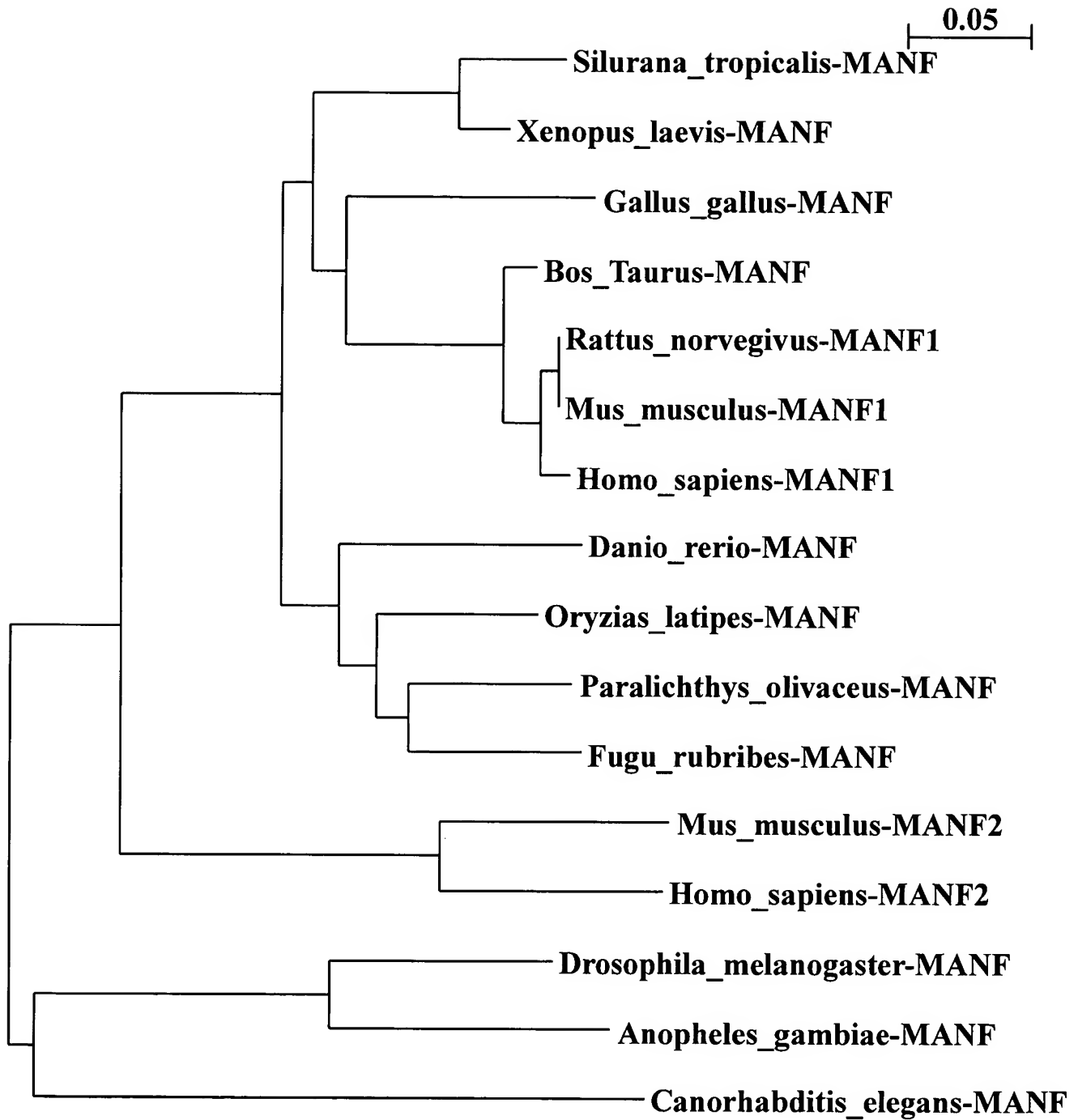


Figure 5

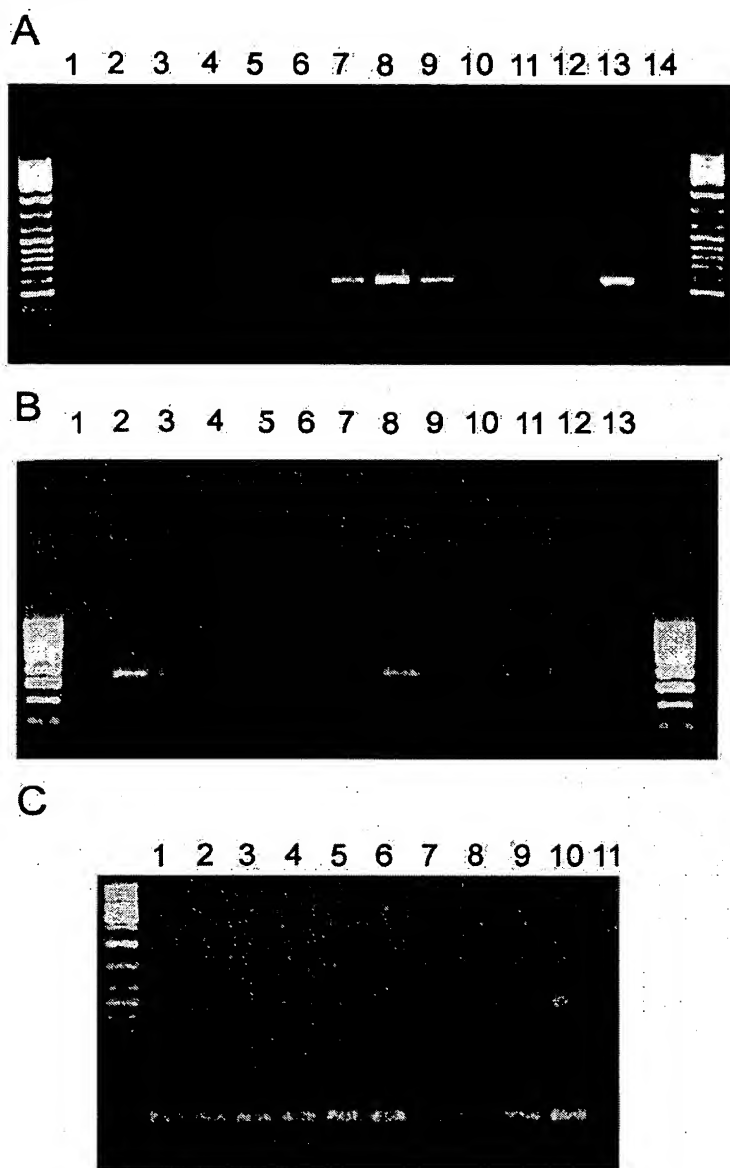


Figure 6

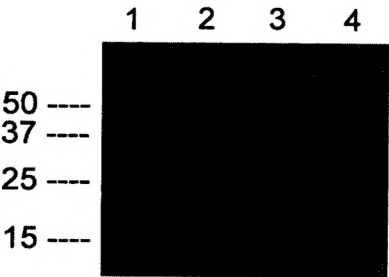


Figure 7

Seq ID NO 1:

>*Homo sapiens* MANF2 cDNA

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tttcgctggacactatagagaaagaattgatcagttttgcttggacaccaaaggaaaagaaaaccgcctgtgctattatctaggag
ccacaaaagacgcagccacaaagatcctaagtgaagtcactcgcccaatgagtgtgcatatgcctgcaatgaagatttgtgagaa
gctgaagaagttgatagccagatctgtgagctgaaatatgaaaaaactggacttggcatcagttgacctgcggaagatgaga
gtggcagagctgaagcagatcctgcatagctggggggaggagtgcagggcctgtgcagaaaaaactgactatgtaatctcattc
aagagctggccccaagtatgcagcgacacaccccaaacagagctctga
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Seq ID NO 2:

>*Homo sapiens* MANF2 protein

```
MWCASPVAVVAFCAGLLVSHPLVTQGGQEAGGRPGADCEVCKEFLNRFYKSLIDR
GVNFSLDTIEKELISFCLDTKGKENRLCYYLGATKDAATKILSEVTRPMSVHMPAM
KICEKLKKLDSQICELKYEKTLDLASVDLRKMRVAELKQILHSWGEECRACAECT
DYVNLIQELAPKYAATHPKTEL
```

Seq ID NO 3:

>*Mus musculus* MANF2 cDNA

```
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tctcgggacaccatagagaaagagctgctcaacttttctcagatgccaaaggaaaagaaaaccgcctgtgctattatctgggggc
caccacagatgcagccaccaagatcctaggagaagtcactcgtcccatgagtgtacacatacctgccgtgaagatttgtgagaag
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gtggcagagctaaagcagatccttcagagatggggggaagagtgcagggcatgtgcggagaaaagtgactacgtgaacctcatt
agagagctggccccaatatgtagagatataccccaaacggagctctga
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Seq ID NO 4:

>*Mus musculus* MANF2 protein

```
MRCISPTALVTFCAGFCISNPVLAQGLEAGVGPRADCEVCKEFLDRFYNSLLSRGI
DFSADTIEKELLNFCSDAKGKENRLCYYLGATTTDAATKILGEVTRPMSVHIPAVKI
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DYVNLIQELAPKYVEIYPQTEL
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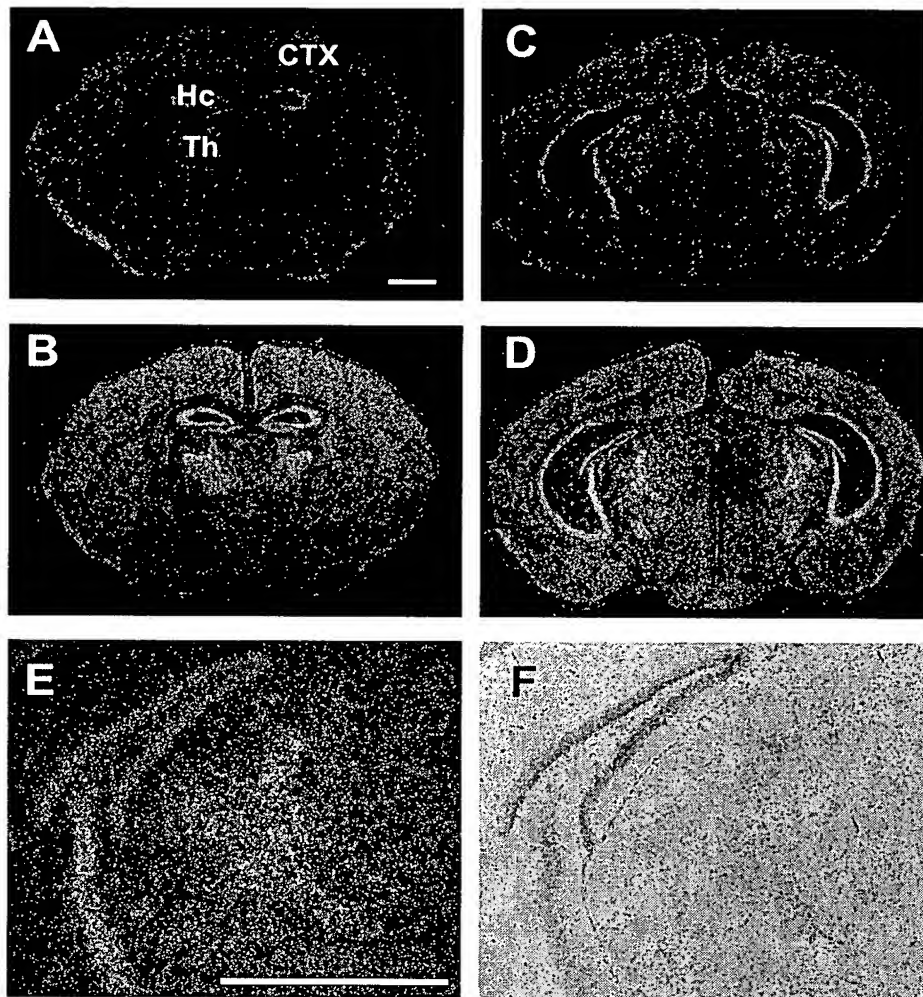


Figure 8.

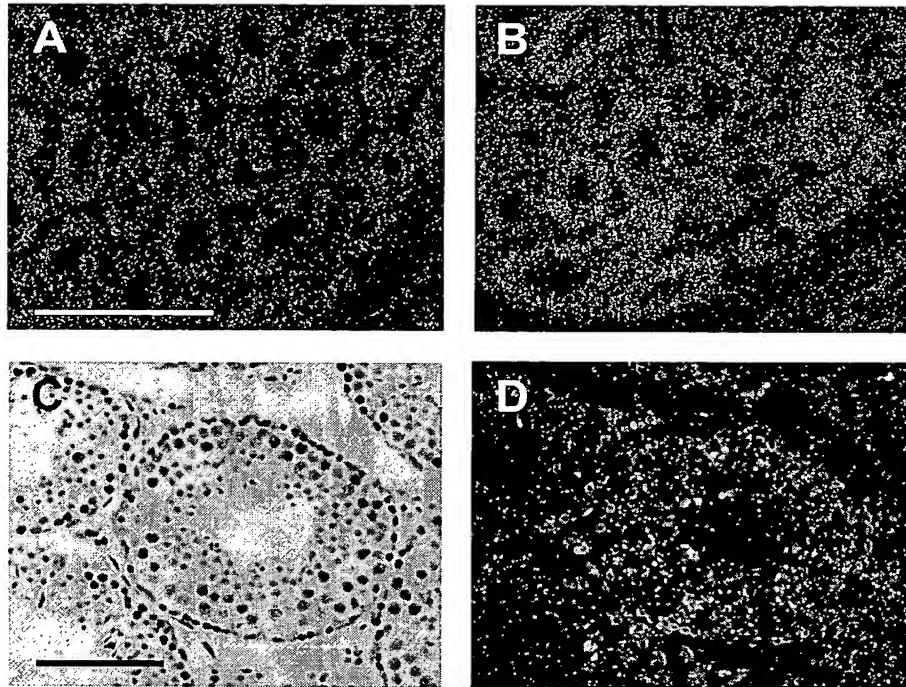


Figure 9.

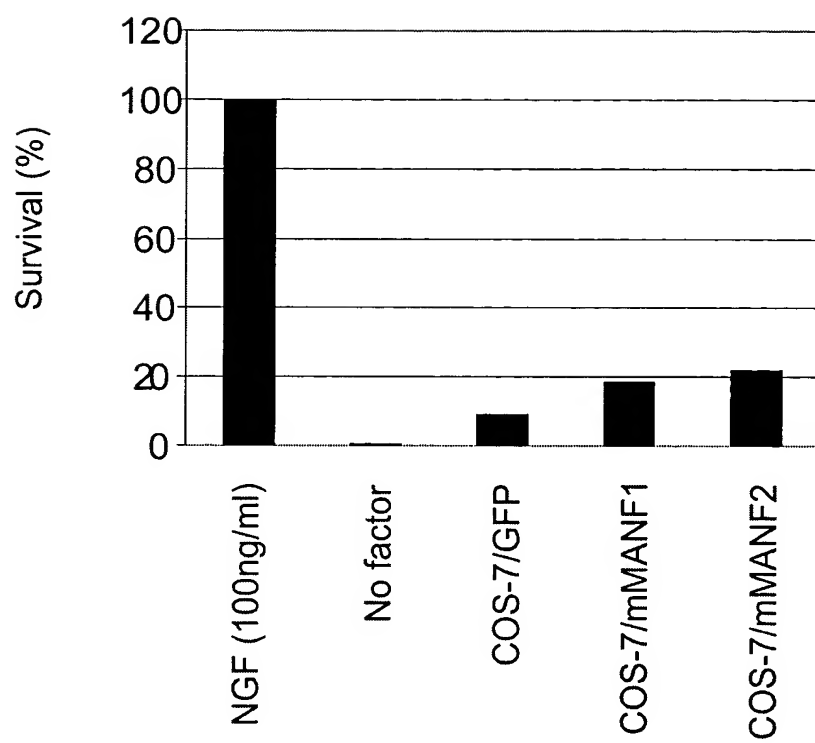
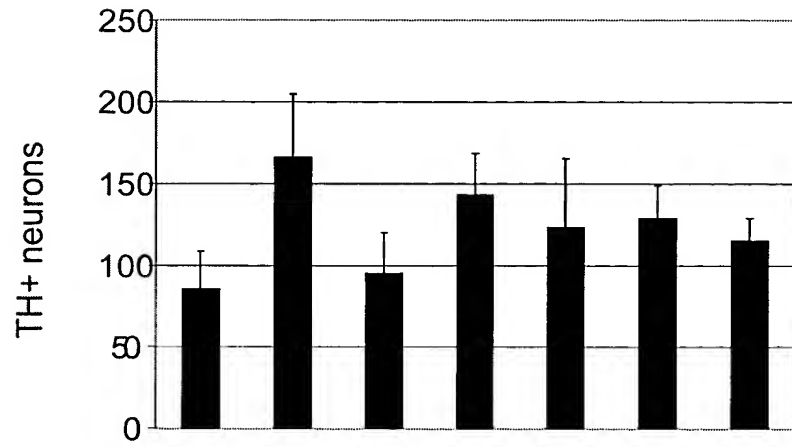


Figure 10.

A



B

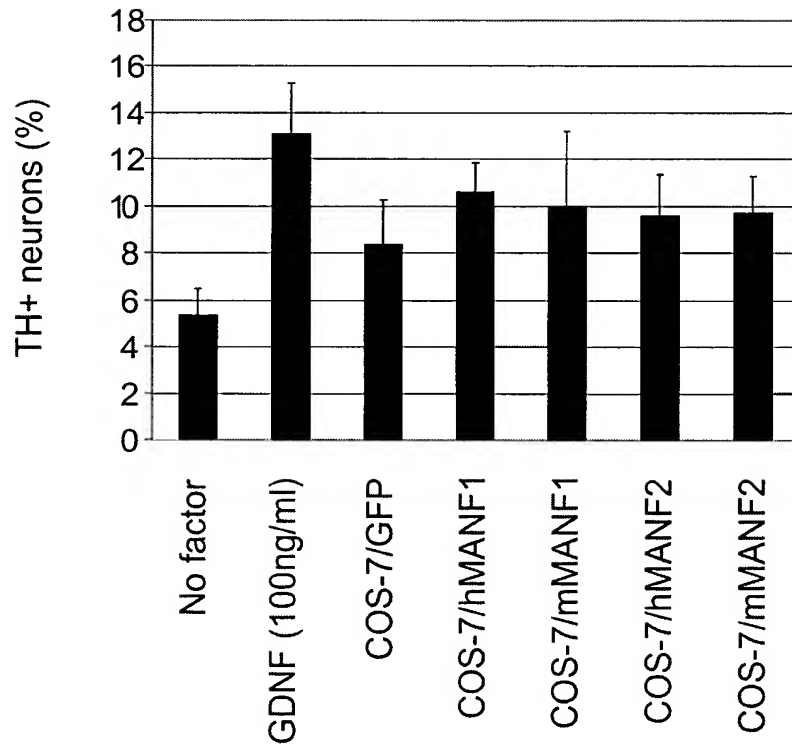


Figure 11.

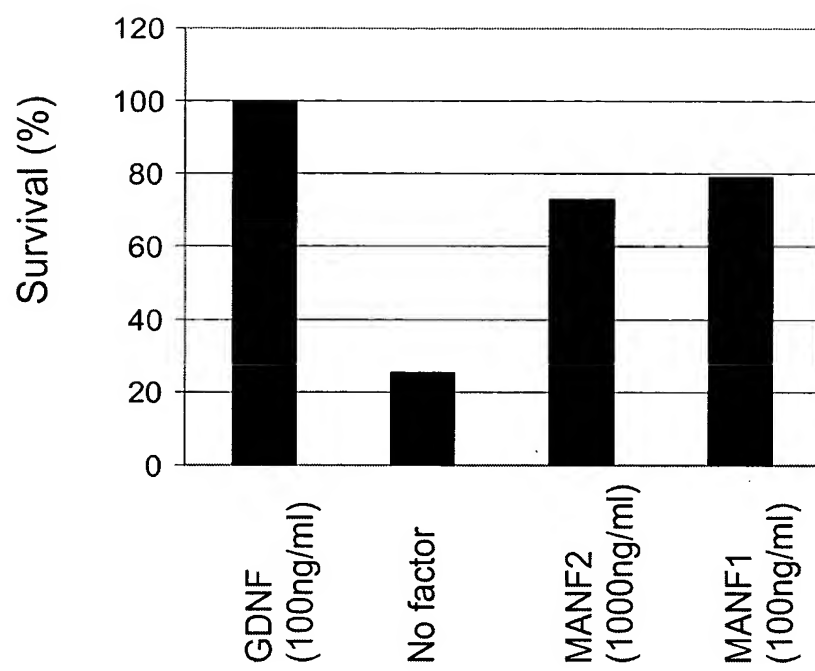
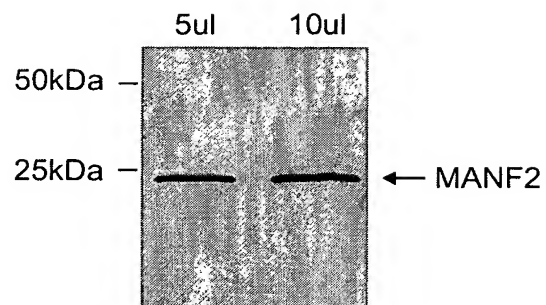


Figure 12.

A



B

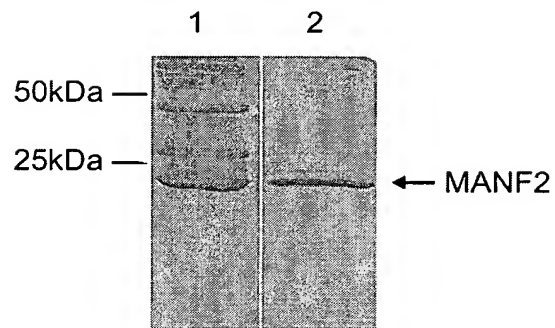
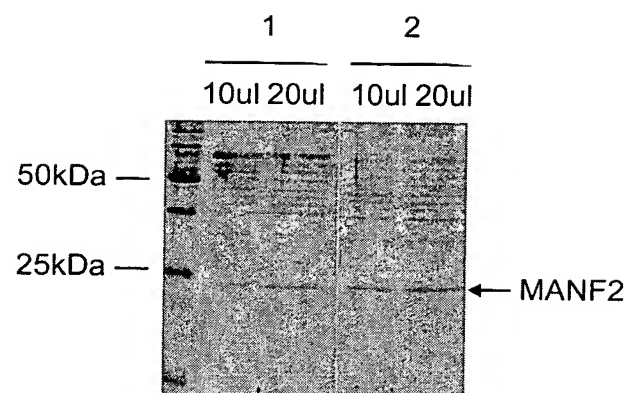


Figure 13.

A



B

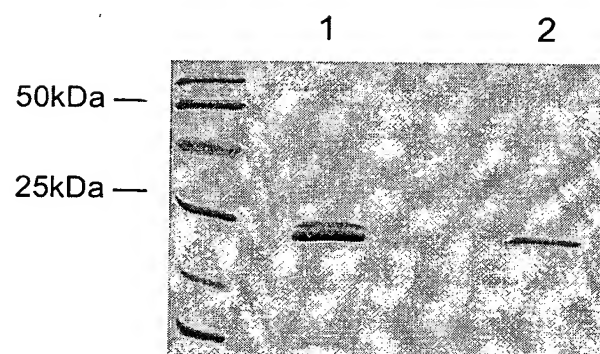


Figure 14.

Figure 15

>*Homo sapiens* MANF2 protein

*

MWCASPVAVVAFCA^{*}GLLVSHPVLTQ^{*}QEAGGRPGADCEVCKEFLNRFYKSLID
RGVNFS^{*}LDTIEKELISFCLDTKGKENRLCY^{*}YLGATKDAATKILSEVTRPMSVHMPA
MKICEKLKKLDSQICELKYEKTLDLASVDLRKMRVAELKQILHSWGEECRACA^{*}EK
TDYVNLIQELAPKYAATHPKTEL